Nancy. Meantime the recruiting of lawyers and doctors goes on at Strasburg with foreign elements, not without some regret on the part of the native inhabitants. But little by little the force of circumstances is tending to bring the young Alsatians to constitute the University of Strasburg in spite of sentiment. Instead of 69 students, natives of Alsace-Lorraine, registered in 1872, the University registers showed 252 in 1884—a notable increase. As against 5,990 matriculated students at the University of Berlin, 3,399 at Leipzig, 2,276 at Munich, 1,646 at Breslau, 1,452 at Halle, 723 at Heidelberg, 625 at Freiburg, there were to be reckoned but 858 at Strasburg during the summer semester of 1884. No doubt this number will increase rapidly; for in no other centre of the higher education are the means of work so abundantly provided. As to the professorial staff, it includes many celebrities, amongst whom may be named Labaud in the faculty of law; Reuss in the faculty of theology; Brentano, Krapp, and Merkel in political science; Kussmaul, Lucke, and Recklingshausen in the faculty of medicine; Gerland, Michaelis, and Studemond in the faculty of philosophy; Kundt, Benecke, von Bary, and Fittig in the faculty of natural sciences. In selecting these names we do not forget the glory of the former university of the last century, when Strasburg had amongst the number of its celebrities Profs. Blessig, Lauth, Schœpflin, Schweighæuser, Oberlin, worthy predecessors of the Duvernoys, Schimpers, Gerhardts, Pasteurs, Daubrées, Sédillots, Janets, Fustels, Coulanges, Forgets, and Kusses of our time. On August 6th, 1771, Goethe graduated doctor of laws of the University of Strasburg, with a thesis on the respective rights of State and Church. If to-day the new University has as an accessory function that of contributing to the Germanisation of the annexed provinces, it may at least be said that the staff of professors of the older university of last century had rallied to French politics in the most open manner. Witness the address to King Louis XV. dated October 6th, 1744:—"Sire, the most faithful of the universities in your kingdom offers to your Majesty its homage and its good wishes. Penetrated with joy at the convalescence and at the arrival of its august monarch, it to-day, Sire, finds united in you the father of the people, the protector of the muses, the liberator of Alsace, and the hero. It is to these glorifications of your rare virtues, great king, that we consecrate our work, happy if our words may correspond to the effusion of our hearts, and merit the continuation of the good graces of the most puissant and most beloved of the sovereigns of Europe." Formerly the Académie of Strasburg took up the special task of serving as an intermediary between France and Germany for the propagation of ideas and of the scientific movement. More richly endowed, the new University, applying its greater powers to the development of the human mind, will recognise that the representatives of the people of Alsace-Lorraine have wished to promote its efforts in the largest and most generous manner in the higher interests of science. Science ought to contribute to the union of the people; it has no exclusive national character, and it serves to advance the reign of peace in the world by assuring to us greater prosperity and greater light, whilst developing in us all the love of our own country.

NOTES

THE Royal Medals of the Royal Geographical Society will this year be awarded to Mr. Joseph Thomson and Mr. H. E. O'Neill—to the former for his well-known work in Africa, and to the latter for his thirteen journeys of exploration along the coast and in the interior of Mozambique. The Murchison Grant for 1885 will be awarded to the Pandit Kreshna for his four explorations made while attached to the Survey of India, and especially for his extensive and important journey in the interior of Tibet. The Back Grant goes to Mr. W. O. Hodkinson for his Australian explorations, and the Cuthbert Peek Grant to Mr. J. T. Last for his surveys and ethnological researches in the Southern Masai, Nguru, and other neighbouring countries. The following will be made Honorary Corresponding Members:—Chief-Justice Daly, President of the Geographical Society of New York; M. Elisée Reclus, the eminent geographer; and Herr Moritz von Déchy, the distinguished Austrian explorer of the Sikkim Himalayas, the Caucasus, and other regions.

IT is announced that the next meeting of the American Association for the Advancement of Science will be held on August 26 and following days, at Ann Arbor, Mich.

AT the annual conference of the French learned societies, which met on the 8th inst. in Paris, MM. Faye, Mascart, and Darboux, were appointed president and vice-presidents respectively of the section for the mathematical and physical sciences; and MM. de Quatrefages, Milne-Edwards, and Maunoir to the same offices in the section for geographical and natural sciences.

M. HERVÉ-MANGON, the new French Minister of Agriculture, is a Member of the Academy of Sciences in the Section of Rural Economy and a Professor of Agronomy to the Conservatoire des Arts et Métiers. He was for some time a Director of the establishment, but resigned in order to secure a seat in the French Lower House. He married the daughter of the late M. Dumas.

THE next Ordinary General Meeting of the Institution of Mechanical Engineers will be held on Thursday, April 30, and Friday, May 1, at 25, Great George Street, Westminster. The chair will be taken by the President, Mr. Jeremiah Head, at half-past three o'clock p.m. on Thursday, and at half-past seven o'clock p.m. on Friday. The following papers will be read and discussed, as far as time will admit:—Description of the Maxim automatic machine-gun, by Mr. Hiram S. Maxim, of London; Abstract of results of experiments on riveted joints, with their applications to practical work, by Prof. Alexander B. W. Kennedy, of London (including the latest experiments described in Prof. Kennedy's Report, issued to the members in February); Description of the Tripier Spherical Eccentric, by M. Louis Poillon, of Paris; Description of a blooming mill with balanced top roll at the Ebbw Vale Works, by Mr. Calvert B. Holland, of Ebbw Vale.

The Annual Report of the French Central Meteorological Department states that the weather forecasts last year were verified in 90 cases out of every 100, the percentage having steadily risen from 81 in 1881 to 83 in 1882 and to 87 in 1883. Out of 189 alarm signals sent to the ports, 128 were fully verified, 24 were fairly correct, 37 incorrect, and only two gales were not foreseen. This year the gale of January 11 was foretold, but that of March 22, which did such damage at Cherbourg, was not predicted. It took place in exceptional circumstances, and was of short duration.

DURING the second half of last year several communications appeared in NATURE relating to the nests from which the Chinese birds'-nest soup is made. Mr. Pryer, whose account of his visits to the Gomantin Caves in North Borneo, where the nests are chiefly found, initiated the discussion, has now addressed a long communication on the subject to an English journal published in Japan, the main points of which appear to be as follows:—(1) Owing to a misapprehension, Mr. Pryer was represented as saying that the bats which inhabit the caves constructed the nests as well as the swifts. The bats have nothing to do with the nests. (2) Mr. Layard, in his letter published in NATURE (November 27, 1884), speaks of "traces of blood, from the efforts of the birds to produce the saliva." Mr.

Pryer thinks that the patches of brown-red on the nests may be due to blood from the hands of the gatherers, or to the betel-juice which they constantly expectorate, but not to the bird's blood. (3) The birds do not eat algæ; they are purely insectivorous. (4) Mr. Green says (NATURE, December 11) that a chemical and microscopical examination of the nests suggests that they are made from the saliva of the bird. This Mr. Pryer regards as a physical impossibility, for the bird could not secrete in a few days a mass of saliva more than equal, when dried, to the entire bulk of its own body, and then do this nine consecutive times a year. He thinks that, undoubtedly, some saliva is used by the birds, the algæ (which Mr. Pryer incorrectly called "fungoid growth" in his first account) being used in the same way as a Japanese swallow (*Cecropis japonica*) uses mud. This bird gathers pellets of mud and works them up in its mouth, forming a strong cement, constructing a large bottle-shaped nest, sometimes nearly two feet long; and exactly as the *Cecropis japonica* uses mud, so the Bornean *Collocalia fuciphaga* uses algæ, producing thereby the delicate structure known as edible bird's nest. Besides, Mr. Pryer states that the nest examined by Mr. Green was probably not genuine, as the substance is very easily imitated, and the high price would stimulate adulteration. (5) His previous theory that the distinction between white and black nests is due to the brown outside of the algæ being used for the latter, he now renounces. The birds can only use the inside, and black nests are simply white nests grown old and repaired frequently. The difference is not due to any difference in the site or in the kind of bird. This is the writer's present theory. Owing to some accident (a native printer's mishap possibly), portions of Mr. Pryer's paper are not quite coherent and connected, and some of the words and phrases are misplaced with that ingenious absurdity so characteristic of printers' blunders; but we believe we have given the substance of the communication here.

THE sixteenth annual report of the American Museum of Natural History has just been published. Besides various additions to the collections during the year—the principal being 44 specimens of North American birds, 29 specimens of North American mammals, and 20 monkeys—the trustees report a step of great importance taken in creating a section in the museum called "The Department of Public Instruction." The Legislature of the State of New York having appropriated a sum to enable the curators of the museum to give free lectures, illustrated by its collections, to the teachers of common and normal schools throughout the State, the trustees have accepted the duty, and have arranged for a series of lectures extending over four years, twenty in each year, all to be richly illustrated with original views and drawings specially prepared for the course. The curriculum for the first course 1884–85 includes human anatomy and physiology, forestry, building and ornamental stones, and the animal kingdom.

MR. J. A. ALLEN, who for many years has had charge of mammals and birds at the Museum of Comparative Zoology at Cambridge, has, *Science* states, accepted the curatorship of mammalogy and ornithology in the American Museum of Natural History in New York, where he will enter upon his new duties about May 1.

THE American Government have sent 30,000 land-locked salmon to the National Fish Culture Association, which arrived on Saturday in excellent condition. In this country the hybridisation of the various species of Salmonidæ is extensively prosecuted; and it is proposed to try the experiment of cross-breeding the land-locked salmon with the brook trout or char, thus promoting the culture of a better class of fish than the trout which now abound in our rivers.

DR. H. J. JOHNSTON-LAVIS, of Naples, announces the approaching publication of a "Monograph of the Earthquakes of Ischia," a memoir dealing with the seismic disturbances in that island from remotest to recent times, with special observations on those of 1881 and 1883, by himself, with some calculations by Rev. Prof. Samuel Haughton, M.D., F.R.S., F.G.S., &c. The work will be published by subscription, and intending subscribers should communicate with the author, 7, Chiatamone, Naples.

A SHARP shock of earthquake was felt in Rome on the night of the 9th inst. Bells were set ringing, and many persons were momentarily alarmed by the movement, but that was the extent of its effect. Prof. Stefano Michele de Rossi has communicated the following report to the Press:—"At 2.44 a.m. a distinct shock of earthquake aroused a great part of the population of Rome. From the observations obtained it belonged to the sixth degree of the conventional scale of 10 degrees for intensity. It undulated from south-west to north-east, and then from north-west to south-east. The full duration was about 10 seconds, of which four were occupied by the second phase of the phenomenon. A telegram from Avezzano states that the shock was very strong there in the direction of north to south. No damage done." Telegrams received later from Frosinone report that a shock was felt there at the same time with sufficient force to create general alarm among the population.

THERE has been a renewal of earthquake shocks in the provinces of Granada and Malaga. Early on the morning of the 11th oscillations of more or less violence are reported from Velez Malaga, Antequera, Motril, and the city of Granada itself and some surrounding villages. So far as is known there has been no loss of life or serious damage, but the panic at some places is described as intense, and the inhabitants, refusing to return to their houses, remain in the open country.

SEVERAL shocks of earthquake were felt at Geneva on the 13th.

THE most recent contribution to the much-discussed question of the origin of the mound-builders of the United States is a pamphlet by Mr. C. E. Putnam, issued by the Academy of Natural Sciences of Davenport, Iowa. The Bureau of Ethnology connected with the Smithsonian Institute champions the theory that the race which constructed these mounds may be traced to the ancestors of the present American Indians, while another school of archæologists holds that the mound-builders were more advanced in civilisation than the American Indians, and have endeavoured to trace them to a Mexican origin, or to some common ancestry. This being the broad question at issue, the Davenport Academy, which appears to have adopted no theory on the subject, became possessors by donation of three inscribed tablets and two elephant pipes, *i.e.* pipes with the figure of an elephant carved on them, which are stated to have been found in Iowa. In the words of Mr. Putnam, "if their authenticity is established, then archæologists will find in them strong corroborative evidence that man and the mastodon were contemporary on the American continent, and the mound-builders were a race anterior to the ancestors of the present American Indians, and of higher type and more advanced civilisation." But doubts have been cast on the authenticity of these curious relics by the Bureau of Ethnology, and the Davenport Academy has taken the matter up with some warmth. Mr. Putnam's pamphlet is the Academy's reply, and is a vigorous defence of the genuineness of the elephant pipes and inscribed tablets. It describes in detail the circumstances under which they were discovered, the witnesses present, &c., and lays especial stress on the fact that the two pipes were dug up at different times and places, by independent persons, one, at least, of whom had no notion of the value of the object. The whole subject is one of extraordinary interest, and Mr. Putnam's statement, vouched as it is by a formal resolution of the Davenport Academy, must play an important part in any subsequent discussion as to the value to be attached to these remains, which, if authentic, are acknowledged to have much influence on the final settlement of the question as to who the mound-builders were.

THE use of artificial teeth is not so modern as is generally believed. *Cosmos* states that in the museum of Corneto, on the coast of Italy, there are two curious specimens of artificial teeth found in Etruscan tombs probably dating to four or five centuries before our era. These graves contained the bodies of two young girls. On the jaw of one is still to be seen two incisors fixed to their neighbours by small gold rings; in the other the rings remained, but the artificial teeth had fallen out. The teeth, carefully cut, had evidently been taken from the mouth of some large animal. The dentist's art amongst the ancients was not confined to drawing teeth, and replacing them by artificial ones, for natural teeth have been found which have evidently been treated in various ways. That this curious fact has escaped notice so long, is due to the rarity of Etruscan skeletons, the Etruscans employing cremation generally, and also to the circumstance that modern inquirers are more interested in objects of Etruscan art and industry than in the remains of their ancient owners.

WE have received from the Rev. H. H. Higgins the reprint of a paper read by him before the Literary and Philosophical Society of Liverpool on Museums of Natural History. The writer discusses the subject under four heads, to which a fifth, on the British Museum of Natural History, is added. These are Museum visitors' desiderata, arrangements and appliances. Judging from the attendance at the Liverpool Museum, he calculates that a large majority (about 780 in 1000) of the visitors are those who are not conscious of any purpose beyond a wish to see the Museum, but who fix their attention with more or less intelligence on the objects displayed. The students would number about ten to twenty, and loungers, including children, 200 in the thousand. The first desideratum in a public museum is a better treatment of the specimens which they already possess. The Museum, Mr. Higgins thinks, is a rare one, in which a donation of 100*l*. could *best* be spent in the purchase of fresh specimens; in almost all instances it could be better spent in making the order more intelligible and more instructive, and much of this good work might be done without spending any money. The sections on arrangements and appliances contain many interesting suggestions on these important elements in the success of a museum. A *stammbaum*, or phylogenetic scheme of the pedigree of animals and vegetables, by Prof. Herdman, of University College, Liverpool, is added to Mr. Higgins's paper.

WE have received Dr. Howden's presidential address to the Montrose Scientific and Field Club, on the "Aims of a Naturalists' Field Club," which contains much useful advice as to the methods in which the members of such societies should regulate their studies and researches. What has already been done in local natural history in the vicinity of Montrose and suggestions as to what still lies ready at hand to be done, are described in the concluding portion of the address.

Timber, a weekly journal devoted to the timber and kindred interests, is the title of a new journal, the first number of which appeared on February 28. A large portion of this periodical is occupied with trade announcements and records of sales, with a sprinkling of short articles and paragraphs on subjects connected with the uses of timber or the timber supply. The paper is intended for circulation among, and as the representative of, the numerous trades who work in timber, and does not profess to be anything else.

THE experiments in Paris by the Triboulet system of photographing all the country seen from a captive balloon by opening the valve of a panoramic object-glass with a current sent from the ground has succeeded wonderfully well. As the operators remain on the ground a very small balloon is sufficient to carry the photographic apparatus. The impressions being taken on films can be inspected with a microscope, and are useful for military purposes.

THE additions to the Zoological Society's Gardens during the past week include a Pig-tailed Monkey (*Macacus nemestrinus* ♀) from Java, presented by Mrs. Urquhart; a Chinese Mynah (*Acridotheres cristatellus*) from China, presented by Mr. George Rowler; a Galeated Curassow (*Pauxis galeata* ♂) from Venezuela, presented by Mr. G. A. Crawley; a Chilian Sea Eagle (*Geranoaetus melanoleucus*) from Chili, presented by Mr. Richard J. Jones; a Carrion Crow (*Corvus corone*), British, presented by Mr. A. Browning Priestley; a Smooth Snake (*Coronella lævis*) from Hampshire, presented by Mr. W. H. B. Pain; a Tibetan Wild Ass, or Kiang (*Equus hemionus* ♀) from Tibet, four Sonnerat's Jungle Fowls (*Gallus sonnerati* ♂ ♂ ♀ ♀) from Southern India, deposited; a Mandarin Duck (*Æx galericulata* ♂) from China, a Dark Green Snake (*Zamenis atrovirens*), South European, purchased; two Rendall's Guinea Fowls (*Numida rendalli*) from East Africa, received in exchange; a Gigantic Salamander (*Megalobactrachus giganteus*) from Japan, two Bull Frogs (*Rana catesbiana*) from North America, received on approval; a White-fronted Lemur (*Lemur albifrons*), born in the Gardens.

GEOGRAPHICAL NOTES

MR. WADA, of the Japanese Legation in Berlin, recently laid before the Geographical Society there certain maps produced by the Geological Survey of Japan, which represent the work up to the present of that establishment. It was founded in 1879, and was organised by Dr. Naumann, a German geologist. It consists of topographical, geological, and agrenomical sections, and of a technical and chemical laboratory. The maps prepared by the department for the Geological Congress of Berlin this year were:—(1) An oroplastic map, on a scale of 1 : 860,000, showing the general position and form of the Japanese archipelago, the coasts, ranges of mountains, as well as the depths of the ocean off the coast. (2) A magnetic map. During the preliminary topographical survey magnetic variations were investigated by the help of a portable magnetometer. Magnetic investigations are of extraordinary interest in Japan. The maps show that the variations are frequently very different in kind, the numerous volcanoes causing great irregularity. (3) A geological map constructed from the preliminary surveys of Dr. Naumann and native geologists. This is based on a topographical map, which is not reliable in detail; but it shows the knowledge attained so far of the geological structure of Japan. From this it appears that all the formations are met with in that country, the Palæozoic being universal. Next to these in extent comes granite. A complete report on this subject is to be made by the head of the Survey to the Congress. The topographers have worked now for about four years, and the area surveyed is more than eighty geographical miles square. The completion of the maps for the whole country will take another eight years. The detailed geological survey has reached about the same extent as the topographical survey, but none of the sheets of the map have yet been published, although they exist in manuscript down to the 38th parallel, with the exception of Yezo. The maps, as well as the text, appear in Japanese and English, and the Survey publishes also annual reports, eight of which have already appeared, but only in Japanese. Another map, also prepared for the Congress, is one of the volcanoes, the ages being distinguished by colours. An important portion of the work of the Survey is the study of soils. According to Mr. Wada, a volcanic tufa, consisting for the most part of decomposed silicates, forms a large part of the numerous uncultivated plains at the foot of the mountains. An accurate knowledge of this will be of much value to agriculture. Japanese soils in general are stated to be poor in chalk. This subject will also be dealt with by the head of the Agronomical Section before the forthcoming Congress.